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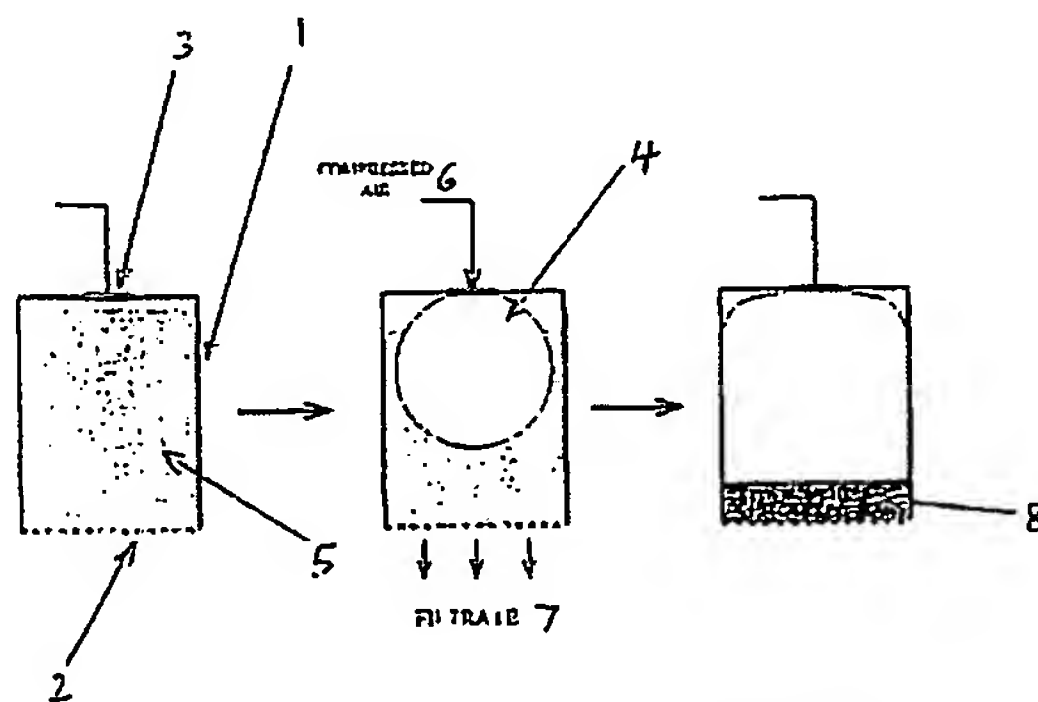
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(54) Title: **METHOD OF COMPACTING A SLURRY BY PRESSURE FILTRATION**



EXPANSION OF AN AIR BAG IN A BARREL TO FORCE  
SLUDGE LIQUOR THROUGH A FILTER

(57) Abstract: The invention provides a method for the reduction of the volume of solid liquid dispersion or suspension, the method comprising the steps of: (a) providing a receptacle comprising at least one permeate a or semi-permeable membrane; (b) introducing the solid/liquid dispersion or suspension into the receptacle; and (c) applying a mechanical force so as to substantially expel the liquid and compact the solid residue; characterised in that the application of the mechanical force comprises the application of pressure to the solid/liquid dispersion or suspension by means of at least one solid mechanical member, the magnitude of the pressure being increased during the process. The receptacle generally comprises a barrel (1), the permeable or semi-permeable membrane is most preferably a filter (2), and the mechanical force is typically applied by means of a source of an inflatable air bag (4) or a hydraulic ram. The compaction of the solid residue from the waste material may additionally comprise compression of the receptacle. In all embodiments of the invention, the residue obtained is suitable for storage or disposal by any appropriate means. The solid/liquid dispersion or suspension preferably comprises an aqueous slurry of waste material, most preferably an Intermediate Liquid Waste slurry generated in the nuclear industry.

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